

**Emergency Support Function – No. 9
SEARCH AND RESCUE**

Primary Agency:

Department of Emergency Management
(VDEM)

Support Agencies:

- Department of Conservation and Recreation,
Division of State Parks (DCR)
- Department of Fire Programs (VDFP)
- Department of Game and Inland Fisheries
(VDGIF)
- Department of Marine Resources
Commission (VMRC)
- Virginia State Police (VSP)

Introduction

Purpose

Emergency Support Function (ESF) #9 – Search and Rescue (SAR) rapidly deploys components of the Search and Rescue Response System to provide specialized life-saving assistance to local jurisdictions during any type of incident. Search and Rescue activities include locating, accessing, stabilizing, and transporting lost, missing, stranded or trapped subjects to a place of safety or another provider within the chain of the emergency response system.

A Search and Rescue emergency can and will occur regardless of a declared state of emergency. The VDEM ESF #9 function routinely supports well over 200 Search and Rescue incidents per year.

Scope

The SAR Response System integrates a broad range of professional and technical specialists who respond to a wide range of mission assignments. Mission assignments are divided into four primary elements of Search and Rescue:

- Aeronautical Search and Rescue

- Land Search and Rescue
- Maritime Search and Rescue
- Urban Search and Rescue

It is understood that certain skill sets may have crossover to one or more of the four primary elements of Search and Rescue.

Mission

SAR will deploy any or all available resources, including trained personnel, facilities and appropriate equipment to locate and render necessary assistance to persons, aircraft and vessels in known jeopardy, or presumed to be in jeopardy.

Organization

- A. The primary agency responsible for the state-level coordination of Search and Rescue activities is the VDEM. Requests for state or federal Search and Rescue assets and coordination will be made through the Virginia Emergency Operations Center (VEOC) which serves as the State Rescue Coordination Center (SRCC.)

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- B. Other state agencies may provide SAR resources or conduct SAR operations within their jurisdiction or capability and may assist SAR efforts at the local, state, or federal level.
- C. Volunteer SAR organizations provide SAR resources to local, state, and federal agencies in accordance with existing agreements, operational procedures, or statutes upon request for services to the SRCC.
- D. Federal agencies may participate in SAR operations within the Commonwealth either because of direct jurisdictional authority and responsibility, or in response to a request for assistance from the SRCC.
- E. Each local jurisdiction should designate a Local SAR Coordinator. In the absence of a formal appointment of a Local SAR Coordinator through a jurisdictional SAR plan, local emergency operations plan, or other form of designation, it is presumed that the Chief Law Enforcement Officer of that jurisdiction will serve as the default Local SAR Coordinator. The Chief Law Enforcement Officer is the senior law enforcement official of the primary law enforcement agency for a given political subdivision. It is further understood that a SAR incident, and in particular a missing person incident, may occur as the result of criminal activity and would therefore be the responsibility of law enforcement. The Local SAR Coordinator is responsible for SAR operations with their respective political subdivision, including training, organization, and response.
- F. Each local jurisdiction should consider the adoption of a formal SAR Plan. The SAR plan should include the division of duties and responsibilities within the jurisdiction, an inventory of assets and resources under the direct control of the

jurisdiction, and a call-out procedure to deploy those local assets.

Policies

- The National Search and Rescue Plan
- The National Response Framework

Concept of Operations

- A. SAR missions may occur as the result of a wide-area, natural or man-made disaster in which case, the SAR operation(s) may be one aspect within the whole of a greater incident. More frequently however, SAR operations occur as a single, geographic point-specific incident. Regardless of the cause or size of the incident, SAR operations are conducted to affect the rescue and/or recovery of:
 - 1. Overdue, lost, missing, stranded, injured, or trapped persons.
 - 2. Overdue, missing, or downed aircraft.
 - 3. Overdue, missing, disabled, stranded, or sinking vessels.
- B. Requests for SAR assistance may originate from several sources, to include:
 - 1. Local government emergency communications centers.
 - 2. Local law enforcement or other public safety official.
 - 3. State agencies such as the DGIF, Division of State Parks, or the VSP.
 - 4. Adjacent state's emergency management office, state police, or other state level law enforcement official such as a conservation officer or park ranger.
 - 5. The National Park Service.
 - 6. The Air Force Rescue Coordination Center (AFRCC).

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7. Coast Guard Division Five Operations Center (CGDFIVE OPCEN)
 8. Emergency Management Assistance Compact (EMAC) request.
 9. Private citizens who are normally referred back to the local jurisdiction depending upon the circumstances.
- C. The VEOC will allocate requested SAR resources based upon availability and the appropriateness of the request.
- D. The VEOC will notify AFRCC, CGDFIVE OPCEN, or FEMA if federal resources are needed.

Operational Procedures

A. Lost / Missing Person Incident:

1. The coordinating agency is normally the Legal Responsible Agent of the local jurisdiction where the incident is determined to have occurred.
2. In the event local jurisdictional responsibility cannot be determined due to the missing subject's projected travel across multi-jurisdictional boundaries, the Virginia State Police or other state agency as appropriate will serve as the coordinating agency until such time local jurisdiction can be determined and local responsibility can be assigned.
3. Upon request of an authorized official or Legal Responsible Agent described above, VDEM will coordinate and provide assistance as appropriate.
4. This does not preclude local resources operating in support of a direct request from another jurisdiction, or supporting operations in areas with concurrent local, state, or federal jurisdictions under existing agreements.

B. Missing / overdue aircraft:

1. The AFRCC will notify the SRCC of any known reports of missing / overdue aircraft whose known or suspected flight path includes Virginia air space.
2. The AFRCC retains jurisdiction at the federal level for incidents involving missing / overdue civil aircraft (both commercial and general aviation), and military aircraft over U.S. air space.
3. The AFRCC will coordinate search efforts through the SRCC and state assistance will be determined upon the circumstances of each incident.
4. VDEM will serve as the coordinating agency (SRCC) at the state level for incidents involving civil aircraft presumed lost over Virginia air space.
5. Ground Search and Rescue efforts in support of missing / overdue aircraft operations will be coordinated through and between the AFRCC, the SRCC, the State SAR Coordinator, the SMC, and the affected local jurisdiction(s).
6. On-scene responsibilities will transfer to the Legal Responsible Agent of the local jurisdiction at such time the crash site becomes apparent.

C. Known Aircraft Accidents:

1. At the federal level, the Federal Aviation Administration (FAA) will investigate all aircraft accidents. The National Transportation Safety Board (NTSB) will investigate all aircraft accidents involving one or more fatalities. Typically, these agencies will coordinate directly with the local jurisdiction in which the incident occurred.
2. At the state level, the Virginia State Police will investigate and report all

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aircraft accidents as per the Code of Virginia §5.1-23.

3. In the event of a fatality the local jurisdiction will notify the local Medical Examiner to perform a death scene investigation as per the Code of Virginia §32.1-283.
4. Additional state assistance will be determined based on the circumstances of each incident and if necessary, will be coordinated by VDEM.

D. Emergency Distress Beacons:

1. Emergency Distress Beacons (EDBs) originate from three sources:
 - a. Emergency Locating Transmitters (ELT) are required by the FAA to be installed on all aircraft other than those classified as privately owned, experimental aircraft.
 - b. Emergency Position Indicating Radio Beacons (EPIRB) are encouraged among marine craft, but are only required for commercial marine craft.
 - c. Personal Locator Beacons (PLB) are an option for individual outdoor pursuits, but not required for anyone under the law.
2. Emergency Distress Beacons are captured and recorded by the SARSAT-COSPAS satellite system, and transmitted to the AFRCC for a response action.
3. The AFRCC will notify the appropriate SRCC of distress beacon activity in all cases.
 - a. ELT / EPIRB: The AFRCC will initiate and coordinate the search effort through the SRCC, based on the presumption of a downed aircraft or distressed vessel. If the event is determined to be a maritime

event, the AFRCC will transfer federal responsibility to the U.S. Coast Guard. State assistance will be determined and provided based on the circumstances of each incident.

- b. PLB: The AFRCC will notify the SRCC of the general beacon location. VDEM will initiate and coordinate the search response with those affected jurisdictions that lack the capability and equipment to detect the beacon signal to determine the precise location. As with lost and missing person scenarios, the local jurisdiction is ultimately responsible for any necessary medical care and transport to an appropriate treatment facility.

E. Swiftwater Rescue:

1. The coordinating agency is normally the local jurisdiction where the flooding event has occurred.
2. VDEM will coordinate requests for additional assistance based on the availability and location of known swiftwater resources.
3. Swiftwater rescue resources may include both locality-based, or state-based resources.
4. Local jurisdictions may elect to avail their swiftwater rescue resources to the state, based upon the needs or forecasted needs of their jurisdiction during any flooding event.
5. State agencies may also elect to make their swiftwater rescue resources available to the state based upon other operational priorities, notwithstanding a state declaration of emergency by the Governor.

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F. Urban Search and Rescue:

1. Urban Search and Rescue (USAR) teams are typically deployed in response to catastrophic incidents that involve collapsed structures trapping multiple victims.
2. FEMA maintains two (2) Urban Search and Rescue (USAR) task forces, home-based within the Commonwealth of Virginia.
 - a. Virginia Task Force One (VATF-1) is based in Fairfax, Virginia, and hosted by the Fairfax County Department of Fire and Rescue.
 - b. Virginia Task Force Two (VATF-2) is based in Virginia Beach and hosted by the Virginia Beach Fire Department. Both (Fairfax County and the City of Virginia Beach) teams are comprised of members from the surrounding jurisdictions.
3. Both task forces are federal assets under the direct control of FEMA.
4. FEMA is responsible for notification to the SRCC when activating and deploying either team beyond the borders of the Commonwealth.
5. FEMA assumes full financial and operational responsibility for federal activation and deployment of the Virginia Task Forces.
6. VDEM retains the option to activate VATF-1 and VATF-2 for deployment within the Commonwealth.
7. In the event of a state activation, VDEM will coordinate response activities and the Commonwealth will assume financial responsibility for team expenses.

G. Regional Technical Rescue:

1. Regional Technical Rescue teams can be deployed to augment local

fire and rescue efforts when the scope of the incident exceeds the capability of local resources.

2. Technical Rescue capability includes:
 - a. Structural Collapse.
 - b. Rope Rescue
 - c. Confined Space.
 - d. Vehicle / Machinery Rescue.
 - e. Water Rescue.
 - f. Trench Rescue.
3. Technical rescue teams are located in each of the seven (7) regions as designated by the Virginia Department of Fire Programs.
4. Technical rescue teams can be deployed through a formal State Mutual Aid (SMA) or EMAC request.
5. In the event of an SMA deployment, the requesting jurisdiction will be responsible for assuming the financial responsibility for the team expenses, unless the deployment coincides with a formal declaration of emergency by the Governor, in which case the Commonwealth will assume financial responsibility.
6. In the event of an interstate deployment under EMAC, financial reimbursements will be subject to existing EMAC procedures and protocols.

H. Responsibilities for Search and Rescue within volunteer organizations and local, state, and federal government:

1. Volunteer Search and Rescue organizations operating under a Memorandum of Understanding (MOU) with VDEM, to include the Civil Air Patrol will:

Provide SAR resources upon request of the SRCC to respond to SAR incidents under the purview of local, state, or federal jurisdictions, and in accordance with existing

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- agreements, policies and procedures.
2. Local jurisdictions will:
 - a. Conduct SAR operations within their political boundaries and within their capability.
 - b. Assist and support SAR operations in adjacent jurisdictions when requested, and in accordance with existing mutual aid agreements, procedures or statutes.
 - c. Make known to VDEM those organized and formal SAR assets that may be available to support an SMA or EMAC request.
 3. State Agencies:
 - a. The Virginia Department of Emergency Management will:
 - 1) Coordinate Search and Rescue efforts statewide to include the deployment and use of SAR assets to support operations at the local, state or federal level.
 - 2) Assist with the coordination of SAR assets for national or international SAR incidents upon request.
 - 3) Administer wilderness-based SAR performance standards and conduct SAR training for law enforcement, fire-rescue, EMS, and volunteer SAR organizations.
 - 4) Maintain a database of SAR resources and SAR incidents coordinated by the SRCC.
 - 5) Provide on-scene or direct coordination of specific SAR incidents under the following criteria:
 - a) Any incident at the request of the local jurisdiction.
 - b) All declared overdue / missing aircraft events that result in a ground search effort.
 - c) Any incident that involves on-scene multi-state jurisdictional coordination.
 - d) Any viable intra-state lost or missing person search that cannot be assigned local responsibility due to lack of initial geographical specific incident assessment information. Once local jurisdiction can be assigned, coordination responsibility will immediately transfer to the Legal Responsible Agent.
 - e) Any high-profile incidents involving state coordinated assets as determined by the State Coordinator of Emergency Management or his/her designee.
 - b. The Virginia State Police (VSP) will:
 - 1) Support requests for SAR assets within their capabilities and within the parameters of other operational commitments, existing agreements, protocols, and statutes as required.
 - 2) Provide on-scene coordination of state SAR assets if requested by VDEM.

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- c. The DCR, DOF, DGIF, and VMRC will support requests for SAR assets within their capabilities and within the parameters of other operational commitments, existing agreements, protocols, and statutes as required.
- 4. Federal Agencies:
 - a. The AFRCC will coordinate federal SAR assets and assume lead role for missions involving a missing / overdue aircraft and emergency distress beacons occurring within the inland regions of the continental United States to include the Commonwealth of Virginia.
 - b. CGDFIVE OPCEN will coordinate federal SAR assets and respond to missing / overdue aircraft or vessels, and emergency distress beacons occurring within the maritime regions of the Commonwealth.
 - c. The Department of Interior (DOI) will coordinate federal SAR assets for wild land search operations within the inland regions of the continental United States to include the Commonwealth of Virginia.
 - d. The National Park Service (NPS) will respond to SAR events within their jurisdiction, and may assist with SAR operations in adjacent jurisdictions upon request.
 - e. FEMA will coordinate the response of the Urban and Search and Rescue (USAR) System upon the request of VDEM. FEMA will provide a liaison to the VDEM ESF-9

function in the event a USAR asset is activated for a mission in the Commonwealth.

REFERENCES

- A. The National Search and Rescue Manual
- B. Search and Rescue Agreement between the Commonwealth of Virginia and the United States Air Force
- C. Statement of Understanding between the Commonwealth of Virginia and the United States Coast Guard
- D. Joint Agreement between the Commonwealth of Virginia and the Commander, Virginia Wing, Civil Air Patrol
- E. Commonwealth of Virginia Emergency Operations Plan
- F. Memorandums of Understanding between the Commonwealth of Virginia Department of Emergency Management and Volunteer Search and Rescue Groups
- G. The National Response Framework
- H. The National Resource Typing Matrix

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DEFINITIONS AND RELATED INFORMATION

Air Force Rescue Coordination Center

(AFRCC) Serves as the Federal SAR Coordinator for all Inland Regions involving missing / overdue aircraft and Emergency Distress Beacons.

Authority Having Jurisdiction (AHJ)

The agency or entity exercising jurisdiction over an incident. The authority of the AHJ may be derived from jurisprudence of a political subdivision, or by legal responsibility for a given type of incident.

Chief Law Enforcement Officer (CLEO)

The senior law enforcement official of the primary uniformed law enforcement agency for a given political subdivision. For those local jurisdictions with both a county police department and a county sheriff's office, it is presumed the CLEO is the Chief of the County Police Department.

Civil Air Patrol (CAP) The official auxiliary of the United States Air Force. CAP serves as the primary federal asset to respond to missing / overdue aircraft and emergency distress beacons.

Coast Guard District Five Operations

Center (CGDFIVE OPCEN) Serves as the Federal SAR Coordinator for overdue / missing aircraft or vessels, and emergency distress beacons that occur within sub-district five of the Maritime region.

Emergency Distress Beacons (EDBs)

Broadcasts a radio signal on a set frequency established for the type of beacon, once activated. There are three basic types of EDBs of primary concern to SAR: (1) Emergency Locating Transmitters, (2) Emergency Position Indicating Radio Beacons, and (3) Personal Locator Beacons.

Emergency Locating Transmitter (ELT)

Required by the FAA for all commercial and general aviation aircraft. ELTs begin transmitting automatically on impact. False (non-distress) signals can be generated by a hard landing or other anomalies. The device itself does not generate an audible signal that can be detected by the human ear. Therefore some pilots may not be aware their ELT is broadcasting a false distress signal. ELTs transmit on a radio frequency of 121.5 mhz for civil aviation, and 203.mhz for military aircraft. Effective 1 February 2009, NOAA has ceased monitoring the analog signals. The new ELT's now broadcast on a digital signal of 406 Mhz.

Emergency Position Indicating Radio

Beacon (EPIRB) A similar device to the ELT, the EPIRB is designed for use on marine craft. Required by law on commercial marine craft, but optional for private use water craft. The EPIRB can be activated manually, but will transmit automatically if the craft rolls over to a position of 90 degrees or greater from the upright position. Effective 1 February 2009, NOAA has ceased monitoring the analog signals. The new EPIRB's now broadcast on a digital signal of 406 Mhz.

Global Positioning System (GPS)

A series of satellites in geosynchronous orbit over the earth, which broadcasts a continuous signal burst. The signals are interpreted by a ground receiver which calculates near-precise position information based upon the bearing and range to each satellite signal received.

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Incident Commander (IC) The ICS term for the individual with overall responsibility for an incident. In terms of SAR, the person with the legal responsibility is the Legal Responsible Agent (RA). Trained SAR volunteers may also use this term to identify those individuals who have achieved the highest levels of training, and are qualified to assume operational responsibility for a SAR incident. Their appointment to this function comes through the RA. See also SAR Mission Coordinator.

Inland SAR Region Defined by the National Search and Rescue Plan as being all land within the continental United States. Inland SAR Regions are further defined by state boundaries.

Legal Responsible Agent (RA) The agency having authority for an incident within a political sub-division. For the purposes of SAR, this normally indicates the Chief Law Enforcement Officer, or his / her designee. Normally the Officer In Charge (OIC) of a SAR incident.

Local SAR Coordinator The individual responsible for SAR operations within a political sub-division who has been formally identified or appointed through a plan adopted by the local government.

Maritime SAR Region Defined by the National Search and Rescue Plan as all coastal and navigable inland waterways.

National Resource Coordination Center (NRCC) Operated by FEMA, the NRCC is activated during federally declared disasters. Requests for federal resources are routed through the NRCC.

National Search and Rescue Committee (NSARC) The body of federal agencies with a responsibility for search and rescue, who collectively administer the National Search and Rescue Plan. Committee membership includes: U.S. Air Force, National Park Service, National

Oceanographic and Atmospheric Administration, Department of Transportation, U.S. Coast Guard, Federal Communications Commission, and the National Aeronautics and Space Administration.

National Search and Rescue Plan The guiding document that assigns responsibility at the federal level for SAR coordination, and provides the foundation for civil SAR response.

Personal Locator Beacon (PLB) An optional device in use by outdoor adventurers to signal for help in the event of an emergency. The PLB is manually activated by the user. The PLB broadcasts a radio signal on 406 mhz and also includes a homing signal on 121.5 mhz. Depending on the particular model, the PLB may also include an integrated GPS chip to broadcast near-precise position information as a discreet signal.

SAR Emergency Any SAR incident whether or not related to any other type of incident that requires the immediate deployment of resources to locate and rescue human life in imminent danger or potential jeopardy.

SAR Mission Coordinator (SMC) The person designated by the Legal Responsible Agent, or the Authority Having Jurisdiction to coordinate the on-scene operations of a specific SAR incident. The SMC could be an individual from the local jurisdiction such as the Local SAR Coordinator, or could be one of the qualified resources deployed through the SRCC. Depending on the structure of the organizations involved, the SMC may also be referred to as an Incident Commander (IC).

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SARSAT-COSPAS A joint rescue satellite network established during the cold-war era between the United States and then Soviet Union. Emergency radio signals broadcast by Emergency Distress Beacons (EDBs) are received by the SARSAT-COSPAS system and transmitted back to earth. For the continental U.S., these signals are received by AFRCC at Tyndall AFB, Florida and then acted upon as appropriate depending on the type of signal received and the approximate location.

Department of Emergency Management,
and to coordinate statewide SAR operations.

State Rescue Coordination Center

(SRCC) The single point within the Commonwealth to coordinate statewide SAR operations, or to coordinate with federal SAR resources. In the Commonwealth, this function is provided by the Virginia Emergency Operations Center (VEOC).

State SAR Coordinator The person designated by the State Coordinator of Emergency Management to administer the Search and Rescue program of the

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SEARCH AND RESCUE RESPONSIBILITIES

FEDERAL	STATE	LOCAL
FEMA: Operate the NRCC. Coordinate deployment of US&R teams. U.S. Air Force: Operate the AFRCC , serve as Federal SAR Coordinator for missing / overdue aircraft over U.S. airspace, coordinate deployment of federal assets. U.S. Coast Guard: Operate CGDFIVE OPCEN, serve as Federal SAR; Coordinator for maritime SAR.	VDEM: Operate the VEOC, serve as the SRCC	Appoint Local SAR Coordinator
Administer the National SAR Plan to assign responsibility at the federal level, and to provide federal SAR assets when requested.	Coordinate SAR efforts statewide and assist with coordination of national and international incidents if requested.	Conduct SAR operations within their jurisdiction and within the scope of local capabilities.
Coordinate the use of federal assets during a search and rescue mission, if requested by VDEM.	Coordinate the deployment of SAR resources when requested, and assist the Local SAR Coordinator, other states, or federal agencies if requested.	Request state SAR resources through Local SAR Coordinator if further assistance is necessary.
	Develop and implement performance standards and training programs for first responders with responsibility for SAR.	Request and support SAR training for public safety / emergency services personnel.
	Establish & maintain mission files for SAR incidents coordinated through the SRCC. Maintain database of SAR resources with MOU.	Assist with development of local volunteer SAR resources by supporting local organizational and training efforts.
		Support SAR in adjacent jurisdictions when requested.

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MATRIX OF SAR INCIDENTS AND RESPONSIBLE AGENTS

	Local Jurisdiction	VDEM	VSP	AFRCC	USCG
Missing Person	X				
Missing Overdue Civil Aircraft		X1		X	
Known Aircraft Crash	X2		X3		
Missing Overdue Marine Craft	X4				X5
Emergency Distress Beacons		X6		X7	X8
Technical Rescue	X	X9			
Disaster SAR	X	X9			
<p>X1 – VDEM will coordinate ground search efforts with AFRCC if necessary. X2 – Local Jurisdiction assumes responsibility when crash site becomes known. X3 – VSP required by law to conduct investigation. X4 – Local Jurisdiction responsible for inland waterways. X5 – USCG responsible for coastal and navigable waterways. X6 – VDEM will coordinate PLB missions for those jurisdictions that lack capability. X7 – AFRCC will coordinate ELT and inland EPIRB missions. X8 – USCG will coordinate EPIRB missions over coastal and navigable waters. X9 – VDEM will assist with regional coordination for additional resources as needed.</p>					